4.12 HAZARDOUS MATERIALS

This section describes existing contamination identified in the proposed Project area, and identifies ways in which hazardous materials associated with the Project could be accidentally released, whereupon they could adversely affect other resources such as biologic resources, water quality, or public safety. Comments received during public scoping and the review period for the October 2004 Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) are also addressed in this section. Representative comments include the need to develop a spill prevention plan and training; potential release of drilling fluid to the seafloor; and shipment, storage, disposal, and spill reporting requirements.

This section also discusses the potential for encountering hazardous contaminants in the surface or subsurface, both offshore and onshore, during Project activities, based on the results of a database search for known or suspected environmentally regulated sites and a review of information regarding the locations of known methane and hydrocarbon seeps in the Project area (CDOC 2004). The Applicant conducted soil sampling at the proposed shore crossing to supplement these data. The likelihood of hazardous material impacts from the proposed alternatives is evaluated relative to the Project, and Applicant and mitigation measures are proposed to avoid or lessen potentially significant environmental impacts.

This section does not discuss potential impacts from accidental releases of LNG or natural gas. These impacts are discussed in Section 4.2, “Public Safety: Hazard and Risk Analysis,” and Section 4.6, “Air Quality.” Section 4.7, “Biological Resources – Marine,” addresses the effects of hazardous materials or oil releases to marine biota, and Section 4.8, “Biological Resources – Terrestrial,” addresses the effects of releases to the terrestrial environment. Section 4.18, “Water Quality and Sediments,” addresses potential changes to water quality that might arise from a release of hazardous materials.

Hazardous materials, including fuels, oils, natural gas odorant, and radioactive and X-ray sources for non-destructive testing of pipeline welds, would be stored and used during construction and operation of the floating storage and regasification unit (FSRU), subsea pipelines, and onshore pipelines. These materials would be transported by road and/or vessel. In addition, currently existing contaminated sites could be encountered during construction of the offshore and onshore pipelines.

4.12.1 Environmental Setting

Hazardous materials that may be used during construction or operation of the FSRU and its associated subsea and onshore pipelines are described in Chapter 2.0, “Description of the Proposed Action.” Potential impacts associated with accidental releases of these materials depend on the quantity and type of container, the location where it is used, the toxicity or other hazardous characteristics of the material, and whether it is transported, stored, and used in a solid, liquid, or gaseous form.

The offshore pipeline would be laid on the seafloor except where horizontal directional boring (HDB) would take place. The offshore pipeline route does not pass within 0.43 nautical mile (NM) (0.5 mile or 0.8 kilometer [km]) (the area that could be affected by pipeline construction) of any known ocean dumpsites. Sediment sampled by the Applicant from the HDB exit hole location detected no contaminants.[1] Therefore, it is unlikely that any contaminated sediments would be unearthed during construction offshore.

No releases of hazardous substances from permitted hazardous material or waste-handling facilities present along the onshore pipeline routes were identified; these facilities are regulated by State or Federal agencies, and any known releases of hazardous materials at these sites would have been identified as part of the database search. The presence of an underground storage tank (UST) on a site was not considered unless it also appeared in the leaking underground storage tank (LUST) database (see the summary of Environmental Data Resources, Inc. (EDR) reports in Appendix K). Any locations where hazardous materials are only stored or used within a facility, but are not known to have been released, would not affect onshore Project construction or operations.

Construction in the onshore pipeline right-of-way (ROW) could release methane or other flammable or toxic gases from nearby landfills, causing potential health hazards to construction workers and the public. However, neither of the two onshore pipeline routes passes within 0.5 mile (0.8 km) of a known landfill; therefore, any occurrence of this potential impact would be unlikely.

4.12.1.1 FSRU and Subsea Pipelines

No known ocean dumpsites that might contain waste hazardous materials have been identified within 0.43 NM (0.5 mile or 0.8 km) of either the proposed FSRU location or subsea pipeline route. The following ocean dumpsites are near the FSRU and subsea pipeline:

- A chemical munitions dumping area (no longer in use) is located approximately 22.6 NM (26 miles or 41.9 km) southwest of the FSRU mooring point; and
- A dredged material dumpsite is located approximately 2.3 NM (2.6 miles or 4.3 km) west of pipeline milepost (MP) 18.

Although there are no known ocean dumpsites along the route (NOAA 2003a), approximately 14 miles or 22.6 km) of the subsea pipeline, i.e., from MP 4 to MP 18, would lie within the Point Mugu Sea Range. Unexploded ordnance (UXO), drones, or

[1] HDD and HDB employ similar technology in that both require the use of drilling fluid as a lubricant for the drill head and to stabilize the drilled hole; however, HDB has a pump that returns excess drilling fluid and cutting spoils to the drill rig for reuse and the HDD does not.

other debris from missile testing may be located near or within the proposed subsea pipeline corridor.

The Applicant proposes to install two pipelines beneath Ormond Beach using HDB. This methodology is discussed in Section 2.6.1, "Shore Crossing via HDB." Methane and hydrocarbon seeps are found throughout the southern California coastal area, including offshore. However, no known natural methane or hydrocarbon seeps are located along the subsea pipeline routes.

4.12.1.2 Onshore Pipelines

Potential contaminated sites located within 0.25 mile (0.4 km) of the proposed and alternative routes were identified using database search results. Appendix K contains a summary of the sites identified in the EDR database search. There were no National Priorities List (NPL) or NPL-proposed sites identified along the onshore pipeline routes. However, some sites have known or are suspected to contain contamination in soil or groundwater. The results of the EDR search, presented in Table 4.12-1, and subsequent searches of publicly available environmental databases are discussed individually below for each onshore pipeline route.

Although oil and gas seeps have been identified in Ventura and Los Angeles Counties, no known natural methane or hydrocarbon seeps are located along the onshore pipeline routes. However, a number of onshore oil seeps have been identified in the general vicinity of the Line 225 Pipeline Loop route and its alternatives. In addition, the northern terminus of the Line 225 Pipeline is at the Honor Rancho underground natural gas storage facility, which is owned and operated by the Southern California Gas Company (SoCalGas). Other than making a connection to this pipeline, the proposed Project does not include making any changes or connections directly to this depleted oil and gas reservoir (BHPB 2004).

Center Road Pipeline

The database search identified 8 environmentally regulated sites located within 0.25 mile (0.4 km) of the proposed Center Road Pipeline, with 52 sites along Alternative 1, 17 sites along Alternative 2, and 7 sites along Alternative 3. The total number of sites for the proposed and alternate routes is less than the sum of these four numbers, as some sites are counted more than once where the sections of the proposed and alternate routes are on the same alignment.

Two sites, the Ormond Beach Generating Station and the co-located Pennington Manufacturing and Borla Performance Industries, are located on Edison Drive between MPs 0 and 1. The other sites occur between MPs 12.5 and 14.7.

Ten known active and closed solid waste disposal sites are within the City of Oxnard, the closest of which is the Arnold Road Dump, located at the end of Arnold Road near the Pacific Ocean, approximately 0.5 mile (0.8 km) from the Reliant Energy Ormond Beach Generation Station Shore Crossing. This location was closed in 1960 (SWIS 2004).

Table 4.12-1 Inventory of Environmentally Regulated Sites Within 0.25 Mile (0.4 km) the Proposed and Alternative Routes

	NPL	Proposed NPL	CERCLIS	CERCLIS-NFRAP	Corracts	ERNS	Cal-Sites	CHMIRS	Cortese	Notify 65	LUST	VCP	HMIRS	REF
Arnold Road Shore Crossing/ Arnold Road Pipeline	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Point Mugu Shore Crossing/ Casper Road Pipeline	0	0	0	0	0	0	0	0	1	0	2	0	0	0
Center Road Pipeline	0	0	0	0	0	3	2	0	5	0	4	0	0	0
Center Road Pipeline Alternative 1	0	0	1	2	0	8	10	0	28	0	34	0	2	2
Center Road Pipeline Alternative 2	0	0	0	0	0	3	5	0	11	0	11	0	0	0
Center Road Pipeline Alternative 3	0	0	0	0	0	3	2	0	5	0	4	0	0	0
Line 225 Pipeline Loop	0	0	2	3	0	11	0	10	19	1	17	1	0	1
Line 225 Pipeline Loop Alternative	0	0	0	1	1	1	0	0	2	0	3	0	0	0

Key:

NPL	National Priorities List
Proposed NPL	Proposed National Priorities Sites List
CERCLIS	The Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) contains data on potentially hazardous waste sites that have been reported to the United States Environmental Protection Agency (USEPA) pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites proposed or on the NPL and sites in the screening and assessment phase for possible inclusion on the NPL.
CERCLIS-NFRAP	As of February 1995, CERCLIS sites designated “No Further Remedial Action Planned” (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund Action or NPL consideration.
CORRACTS	A list of handlers with Resource Conservation and Recovery Act (RCRA) Corrective Action Activity. This report shows which nationally defined corrective action core events have occurred for every handler that has had corrective action activity.
ERNS	The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. Source: USEPA.
CAL-SITES	Formerly known as ASPIS, this database contains both known and potential hazardous substances site. Source: California Department of Toxic Substances Control.
CHMIRS	The California Hazardous Material Incident Report System contains information on reported hazardous material incidents (i.e., accidental releases or spills). Source: California Office of Emergency Services.

Table 4.12-1 Inventory of Environmentally Regulated Sites Within 0.25 Mile (0.4 km) the Proposed and Alternative Routes

CORTESE	This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with underground storage tanks (USTs) having a reportable release, and all solid waste disposal facilities from which there is known migration. Source: California Environmental Protection Agency (Cal/EPA)/Office of Emergency Information.
NOTIFY 65	Notify 65 records contain facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk. Source: State Water Resources Control Board's Proposition 65 database.
LUST	The Leaking Underground Storage Tank (LUST) Incident Reports contain an inventory of reported leaking underground storage tank incidents. Source: State Water Resources Control Board's Leaking Underground Storage Tank Information System.
VCP	Contains low threat level properties with either confirmed or unconfirmed releases; the Project proponents have requested that the California Department of Toxic Substances Control (DTSC) oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.
HMIRS	The Hazardous Materials Incident Report System contains hazardous material spill incidents reported to the Department of Transportation. Source: USEPA.
REF	This category contains properties where contamination has not been confirmed and that were determined to not require direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Note: Some sites are listed under two or more categories.

In addition, the Halaco metal recycling facility is located on Perkins Road in Oxnard, approximately 1 mile west of the Reliant Energy Ormond Beach Generating Station. Because the site is well off the Project route, it is not discussed further.

Line 225 Pipeline Loop

The environmental database search identified 36 environmentally regulated sites within 0.25 mile (0.4 km) of the Line 225 Pipeline Loop, with four sites identified along the Line 225 Pipeline Loop Alternative. The sites are generally spread along the entire length of the proposed route in Santa Clarita.

One site with known contamination of surface and subsurface soils and groundwater that was not identified in the database search is the former Whittaker-Bermite Facility, located at 22116 West Soledad Canyon Road in Santa Clarita. The proposed Line 225 Pipeline Loop alignment would traverse the southern boundary of the former Whittaker-Bermite Facility, and would lie parallel and immediately adjacent to the existing Line 225 pipeline, which was constructed in the late 1950s and early 1960s and has been patrolled and maintained on a routine basis for the past five decades. Therefore, it is not anticipated that UXO would be present along the proposed alignment. In June 2004, the California Department of Toxic Substances Control (DTSC) issued a Consent Order to Whittaker Company to clean up this site (DTSC 2004b). The Consent Order does not contain a specified deadline, but rather states that Whittaker-Bermite shall maintain compliance with State regulations "until the regulated unit has been certified closed by the Department [DTSC]." UXO is a site-wide concern for this location, and UXO surveys are planned for at least some of the site areas (DTSC 2004b).

Four known active and closed solid waste disposal sites are located near the proposed pipeline route within the City of Santa Clarita, the closest of which is the Los Angeles County Public Works Road Department landfill (SWIS No. 19-AA-0300), located approximately 0.85 mile (1.37 km) south of MP 2.0 (SWIS 2004).

4.12.2 Regulatory Setting

The storage and use of hazardous materials, as well as the storage and disposal of hazardous wastes, is extensively regulated. The principal Federal regulatory agency is the United States Environmental Protection Agency (USEPA). Key Federal, State, and local regulations pertaining to hazardous materials associated with the Project are provided in Table 4.12-2.

Table 4.12-2 Major Laws, Regulatory Requirements, and Plans for Hazardous Materials

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
Hazardous Materials, Hazardous Waste, and Oil Spills [a]	
International	
International Convention for the Prevention of Pollution from Ships (MARPOL), as modified by Protocol of 1978 (MARPOL 73/78) - *IMO*	• Regulates pollution and spills from ships. • Contains measures to prevent accidental and operational causes of marine pollution.
Federal	
National Oil and Hazardous Substances Pollution Contingency Plan (NCP) – 40 Code of Federal Regulations (CFR) § 300 - *U.S. Environmental Protection Agency (USEPA)*	• Outlines requirements for responding to both oil spills and releases of hazardous substances; specifies compliance but does not require the preparation of a written plan. • Provides for comprehensive system for reporting, spill containment, and cleanup. • References Executive Order 12777 that reaffirmed that deepwater ports are covered under USEPA regulations. • The U.S. Coast Guard (USCG) and the USEPA co-chair the National Response Team. In accordance with 40 CFR § 300.175, USCG has responsibility for oversight of regional response for oil spills in "coastal zones," as described in 40 CFR § 300.120.
Spill Prevention, Control and Countermeasure (SPCC) Plans, required under the Oil Pollution Prevention Regulation; Non-Transportation-Related Onshore and Offshore Facilities – 40 CFR § 112 - *USEPA and USCG*	• Requires facilities that store, handle, or produce significant quantities of hazardous material to prepare an SPCC Plan to ensure that containment and countermeasures are in place to prevent release of hazardous materials to the environment. • The USCG and the USEPA share responsibility for Federal On-Scene Commander oversight for spills. • The proposed Project would be required to have an SPCC Plan for the onshore construction phase and also if any shoreside transfer stations are manned during operations. • An SPCC Plan is not required for vessels.

Table 4.12-2 Major Laws, Regulatory Requirements, and Plans for Hazardous Materials

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
Facility Response Plan Rule, required under the Oil Pollution Prevention Regulation; Non-Transportation-Related Onshore and Offshore Facilities – 40 CFR § 112.20 - *USCG*	• Establishes requirements for Facility Response Plans. • Establishes procedures, methods, equipment, and other requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities. • A Facility Response Plan would be required for the FSRU because it would store 264,000 gallons (1,000 m^3) of fuel on board.
Clean Water Act - *USEPA*	• Establishes basic structure for regulating discharges of pollutants into the waters of the United States. • Establishes pollution control programs such as setting wastewater standards for industry. • Sets water quality standards for all contaminants in surface waters. • Makes it unlawful for any person to discharge any pollutant from a point source into navigable waters without a permit.
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - *USEPA*	• Provides authority for the USEPA to respond to a release or threat of a release of any pollutant or contaminant which may pose a potential threat to human health and/or the environment. • Establishes prohibitions and requirements concerning closed and abandoned hazardous waste sites. • Provides for liability of persons responsible for releases of hazardous waste at these sites. • Establishes a trust fund to provide for cleanup when no responsible party can be identified.
Superfund Amendments and Reauthorization Act - *USEPA*	• Establishes a nationwide emergency planning and response program and reporting requirements for facilities that store, handle, or produce significant quantities of hazardous materials. • Identifies requirements for planning, reporting, and notification concerning hazardous materials.
Resource Conservation and Recovery Act (RCRA) – 40 CFR §§ 240-299 - *USEPA*	• Establishes system for controlling hazardous waste from its point of origin to its final disposal. Includes handling, storage and disposal requirements.
Coastal Zone Management Act of 1972, as amended Section 307(c)(3)(A) - *National Oceanic and Atmospheric Administration (NOAA)*	• Requires any applicant for a required Federal license or permit to conduct an activity, in or outside of the coastal zone, to provide to the licensing or permitting agency certification that the proposed activity complies with the enforceable policies of the state's approved program and that such activity will be conducted in a manner consistent with the program.[b] The applicant is required to furnish to the state or its designated agency a copy of the certification with all necessary information and data.

Table 4.12-2 Major Laws, Regulatory Requirements, and Plans for Hazardous Materials

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
State	
Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 - *CDFG Office of Oil Spill Prevention and Response (OSPR) and CSLC*	• Established the OSPR within the CDFG. • Seeks to protect the waters of the State from oil pollution and to plan for the effective and immediate response, removal, abatement, and cleanup in the event of an oil spill. • Requires immediate cleanup of spills following approved contingency plans and fully mitigating impacts to wildlife. • Assigns primary authority to CDFG OSPR to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in the marine waters of the State. • Requires vessel and marine facilities to have marine oil spill contingency plans and demonstrate financial responsibility. The CSLC assists the CDFG OSPR with spill investigations and response. The Los Angeles/Long Beach Area Contingency Plan, which is developed by the Area Committee (comprised of Federal, State, and local agencies), identifies the CSLC as having responsibility for spill investigations within the jurisdictional boundaries of the State for terminals and facilities out to 3 NM (3.5 miles or 5.6 km).
Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) - *Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA)*	• Requires businesses to notify Californians about significant amounts of chemicals that are released into the environment. • Develops health-protective exposure standards for different media (air, water, land) to recommend to regulatory agencies. • Administers the Proposition 65 program and evaluates all currently available scientific information on substances considered for placement on the Proposition 65 list. • Makes recommendations to the CDFG and the SWRCB with respect to sport and commercial fishing in areas where fish may be contaminated.
Title 14, California Code of Regulations (CCR), Chapter 3 - *CDFG OSPR*	• Requires specific oil spill prevention measures for non-tank vessels of more than 300 gross tons.
California Coastal Act Chapter 3 Article 4 Section 30232 - *California Coastal Commission*	• Protection against the spillage of crude oil, gas, petroleum, products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures must be provided for accidental spills that do occur.
California Harbors and Navigation Code (CHNC) - *California Dept. of Boating and Waterways*	• Regulates discharges from vessels within territorial waters of the State of California to prevent adverse impacts to the marine environment.

Table 4.12-2 Major Laws, Regulatory Requirements, and Plans for Hazardous Materials

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
California Hazardous Materials Incident Contingency Plan - *CA Office of Emergency Services*	• Describes California's hazardous material emergency response organization.
Hazardous Waste Control Act (Title 26 CCR) - *California Environmental Protection Agency* (*Cal/EPA)*	• Defines requirements for proper management of hazardous materials.
Safety	
International	
International Convention on Standards of Training, Certification, and Watchkeeping 78 - *International Maritime Organization (IMO)*	• Sets forth training, certification, and qualification requirements for senior ship personnel, including officers in charge of a navigational or engineering watch. • Sets ratings forming part of a navigational or engineering watch.
Convention on the International Regulations for Preventing Collisions at Sea (1972) - *IMO*	• Establishes "rules of the road" such as rights-of-way, safe speed, actions to avoid collision, and procedures to observe in narrow channels and restricted visibility.
Federal	
Occupational Safety and Health Standards (29 CFR §§ 1910 and 1926 - *Occupational Safety and Health Administration* (*OSHA)*	• Provides regulations for safety in the workplace. • Provides regulations for construction safety. • Requires a Hazard Communication Plan to include identification and inventorying of all hazardous materials for which Material Safety Data Sheets (MSDSs) will be maintained and employee training in safe handling of said materials.
46 United States Code (U.S.C.) Subtitle II Part B, Inspection and Regulation of Vessels - *USCG*	• All vessels operating offshore, including those under foreign registration, are subject to requirements applicable to vessel construction, condition, and operation. • All vessels (including motorboats) operating in commercial service (e.g., passengers for hire, transport of cargoes, hazardous materials, and bulk solids) on specified routes (inland, near coastal and oceans) are subject to requirements applicable to vessel construction, condition, and operation • Allows for inspections to verify that vessels comply with applicable international conventions and with all United States laws and regulations.

Table 4.12-2 Major Laws, Regulatory Requirements, and Plans for Hazardous Materials

Law/Regulation/Plan/ Agency	Key Elements and Thresholds; Applicable Permits
State	
Title 8, CCR Chapters 3, 4, and 7, Occupational and Industrial Safety - *CalOSHA*	• Establishes requirements for safe working conditions and safety-related reporting in the State. • Requires a Hazard Communication Plan to include identification and inventorying of all hazardous materials for which MSDSs will be maintained and employee training in safe handling of said materials.
Title 17, CCR, Div. 1, Chapter 5, SubChapter 4, Radiation	• Establishes requirements for licensing and handling of radiological and X-ray sources for industrial non-destructive testing (incorporates by reference Federal regulations contained in 10 CFR § 20 with just a few exceptions).

Notes:

[a]Under Federal law, petroleum is regulated as a hazardous material and is subject to the Oil Pollution Act and Clean Water Act. However, petroleum is specifically excluded under Federal law as a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and waste oil and petroleum are not indicated as hazardous waste under the Resource Conservation and Recovery Act (RCRA). In California, petroleum is regulated as a hazardous material. Under the California Underground Storage Tank program, petroleum is considered a hazardous substance, and under California Title 22/26, used and waste oil is classified and regulated as a hazardous waste.

[b]"Coastal zone" is defined to mean all U.S. waters subject to the tide, U.S. waters of the Great Lakes, specified ports and harbors on inland rivers, and the waters of the Exclusive Economic Zone (EEZ). The USCG has designated portions of the Captain of the Port (COTP) zones that are within the coastal zone, for which Area Committees will prepare Area Contingency Plans. The USEPA has responsibility for the "inland zones."

The Applicant, or its designated representative, would transport, store, use, and dispose of hazardous materials and wastes in accordance with the appropriate Federal and State laws and regulations identified in Table 4.12-2 above. Plans that would be prepared and implemented include Spill Prevention, Control and Countermeasures (SPCC) Plans for onshore and nearshore activities; oil spill contingency plans for oil transport-related facilities; a Facility Response Plan for the FSRU; site-specific health and safety plans; and a Hazard Communication Plan.

In addition, the Applicant would store hazardous materials/wastes in U.S. Department of Transportation (USDOT)-approved containers; maintain spill kits and absorbent materials in areas where hazardous materials are used and stored; maintain current Material Safety Data Sheets (MSDSs) for all hazardous materials/wastes; and dispose of hazardous wastes at licensed landfills.

The National Response Plan, most recently revised and updated by the U.S. Department of Homeland Security in 2004, outlines procedures for interaction and coordination of response activities among Federal (U.S. Coast Guard [USCG], USEPA, Federal Emergency Management Agency, U.S. Department of Defense, Occupational Safety and Health Administration, etc.), State, and local response agencies (police, firefighting, emergency management, first responder, etc.). The Oil and Hazardous Materials Incident Annex of the National Response Plan directs the Federal, State and

local authorities to conduct training, plan and execute field exercises, share lessons learned, and, in general, develop and maintain specific procedures for responses to incidents of regional and national significance. A major incident at a deepwater port would be categorized as such an incident. The National Response Plan is supported by the National Contingency Plan, the National Incident Management System, and, at the regional level for an incident involving Cabrillo Port, by the Los Angeles/Long Beach Area Contingency Plan.

4.12.3 Significance Criteria

An impact would be considered significant if Project construction or operation would:

- Use, store, or dispose of oil and/or hazardous materials in a manner that results in a release to the marine or terrestrial environment in an amount equal to or greater than the reportable quantity for that material or creates a substantial risk to human health;
- Mobilize contaminants currently existing in the soil, creating potential pathways of exposure to humans or wildlife that would result in exposure to contaminants at levels that would be expected to be harmful; or
- Expose workers to contaminated or hazardous materials at levels in excess of those permitted by California Occupational Safety and Health Agency (CalOSHA) in California Code of Regulations Title 8 and the Federal Occupational Safety and Health Administration (OSHA) in 29 CFR § 1910, or expose members of the public to direct or indirect contact with hazardous materials from Project construction or operations.

4.12.4 Impact Analysis and Mitigation

Potential impacts and proposed mitigation measures are discussed below. Impacts associated with the spill of hazardous materials are discussed in Section 4.18, "Water Quality and Sediments." Applicant-proposed measures (AM) and agency-recommended mitigation measures (MM) are defined in Section 4.1.5, "Applicant Measures and Mitigation Measures."

Impact HAZ-1: Release of Oil or Hazardous Materials and Contamination of Marine Environment due to Offshore Operations

Improper handling of hazardous materials or leaks in containers on the FSRU could result in a release to the marine environment or exposure of workers or the public (Class III).

As described in Section 2.2.2.4, "Utilities Systems and Waste Management," the FSRU would have two single-wall steel tanks containing 264,000 gallons (1,000 m^3) of diesel fuel with secondary containment consisting of a drip tray with extended walls under each tank. The tanks would be located aft of the FSRU under the deck area. Other materials that would be stored and used on the FSRU include urea, lubricating oils, and

small quantities of various paints, solvents, and other hazardous materials. Dry urea would be delivered in a special container to the FSRU on a supply boat and stored on the FSRU in a dry contained area. Lubricating oil would be stored on board in 55-gallon (0.2 cubic meters [m^3]) drums or 350-gallon (1.3 m^3) totes.

The FSRU would also store up to 4,000 liters of mercaptan gas for the odorization of the natural gas being piped to shore. As discussed in Section 2.2.2.4, "Utilities Systems and Waste Management," this material is a flammable liquid and would be stored on the FSRU in sealed bulk containers within secondary containment.

Materials stored on the FSRU are unlikely to be released into the marine environment because they would be stored in USDOT-approved containers within secondary containment and would be protected within the double hull of the FSRU. Should a spill of diesel fuel or other hazardous material occur, the Applicant's Facility Response Plan would be implemented and the spill contained and cleaned up. The USCG would have jurisdiction over response and cleanup operations.

Supply ships carrying hazardous materials and wastes would make regular trips to and from the FSRU. Potential impacts associated with supply ship transits are discussed in Section 4.3, "Marine Traffic."

The Applicant would develop a Shipboard Oil Pollution Emergency Plan (SOPEP) that complies with the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex 1 for all Project vessels entering the Project area. The USCG Commandant, G-MOR-2, Vessel Response Plan Division, would make final determination on what the Vessel Response Plan or SOPEP must contain and would approve the plan. Compliance with the SOPEP would reduce the potential for a spill to occur and would ensure that the vessel operators could respond to one.

As discussed in Section 4.18, "Water Quality," Impact WQ-5 under "Oil Spills," the Applicant has developed oil spill contingency plans for pipelaying vessels during construction and for FSRU operations. The Applicant is also responsible for developing and implementing a Facility Response Plan to delineate and maintain safe operating conditions aboard the FSRU. The plan would specify the appropriate wind and sea conditions for operation of the vessels, refer to appropriate personnel and evaluation procedures, and require adherence to the ship's oil spill response plan. The USCG retains final approval or denial authority for the plan.

Development and implementation of an approved Facility Response Plan would greatly minimize the chance for a spill of hazardous materials from containers during offshore operations and would ensure rapid clean-up if a release were to occur. This impact is below the level of its significance criteria and no mitigation would be required.

Impact HAZ-2: Release of Oil or Hazardous Materials Spills Could Result in Soil Contamination due to Pipeline Construction Activities

Activities associated with site preparation, construction, and drilling, as well as operations and maintenance activities, could result in an accidental spill of hazardous materials or oil and exposure of workers or the public (Class II).

During construction of the shore crossing using HDB, a release of drilling fluids could occur, resulting in the potential release of drilling fluid into the subtidal nearshore environment. Although drilling fluid is not, in itself, a hazardous material, significant releases of this material could smother benthic organisms. The potential effects on water quality and biota from a release of drilling fluids or any other materials associated with HDB are described in Section 4.8, "Biological Resources - Terrestrial;" Section 4.9, "Biological Resources - Marine," and Section 4.14, "Water Quality and Sediments." If a release of drilling fluids occurred, the impact could be significant.

Onshore, operation of horizontal directional drilling (HDD) equipment could also result in the accidental release of bentonite drilling fluid, which is a non-hazardous drilling fluid. The Applicant, or its designated representative, would implement its best management practices (BMPs) for handling drilling fluids; specifically, BMP 2-08 "Liquid Waste Management" (Sempra 2002).

Construction activities could also result in spills from accidents or improper handling or disposal of fuels or hazardous materials. Vehicle accidents could result in fuel spills from rupturing of fuel tanks, and hazardous materials spills could occur if hazardous material containers were compromised. A spill could expose workers and the public to levels of hazardous materials in excess of applicable regulations. Improper handling or containment of hazardous materials stored on site also may result in spills to which the public or workers could be exposed. The Applicant, or its designated representative, would implement its BMPs—specifically, BMP 2-01, "Material Delivery and Storage," BMP 2-02, "Material Use," BMP 2-03, "Spill Control," and BMP 2-05, "Hazardous Materials/Waste Management" (Sempra 2002).

The Applicant, or its designated representative, has incorporated the following into the proposed Project:

AM HAZ-2a. **Use Best Management Practices.** The Applicant, or its designated representative, would maintain hazardous materials at the staging areas in proper storage containers and with sufficient secondary containment in accordance with best management practices, in addition to Federal and State regulations. Hazardous materials stored temporarily in staging areas would be stored on pallets within fenced and secured areas and protected from exposure to weather.

Mitigation Measure(s) for Impact HAZ-2: Release of Oil or Hazardous Materials Spills Could Result in Soil and/or Groundwater Contamination due to Pipeline Construction Activities

MM HAZ-2b. Maintain Equipment. The Applicant, or its designated representative, shall maintain equipment in operating condition to reduce the likelihood of fuel or oil line breaks and leakage. Any vehicles with chronic or continuous leaks shall be removed from the construction site and repaired before being returned to operation.

MM HAZ-2c. Hazardous Material Contingency Plan. The Applicant, or its designated representative, shall prepare a detailed hazardous material contingency plan that outlines how the contaminated soil and/or groundwater is to be handled and disposed, as well training for personnel.

MM WAT-3a. Implement Drilling Fluid Release Monitoring Plan applies here (see Section 4.18, "Water Quality and Sediments").

Implementation of these measures—employing BMPs to prevent the release of hazardous materials/wastes and HDB and HDD drilling fluids, and maintaining equipment—would significantly minimize the chances of a release of hazardous materials/wastes; therefore, this impact would be reduced to below the level of its significance criteria.

Impact HAZ-3: Release of Existing Contaminants from Sediments, Soils, or Groundwater

Construction activities could unearth existing contaminated sites onshore and offshore, causing potential health hazards to construction workers, the public, and marine and terrestrial ecology (Class II).

The offshore pipeline would be either laid on the ocean floor or drilled well beneath the seafloor; also, the offshore route would not pass through any known hazardous material sites; therefore, offshore contamination would be unlikely.

Much of the proposed pipeline alignments in Oxnard and Santa Clarita are within or immediately adjacent to existing pipeline ROWs, and therefore any contaminated soil would have been previously identified. However, in areas where the pipelines would be installed in new ROWs, it is possible that contaminated soils not previously identified could be encountered. The Applicant, or its designated representative, would implement its BMPs for dealing with suspected contaminated soil, specifically, BMP 2-06, "Contaminated Soil Management" (Sempra 2002).

The alignment of the Line 225 Pipeline Loop from approximately MP 0.35 to MP 1.0 would follow the southern edge of Operable Unit (OU) 10s of the Whittaker-Bermite cleanup site and OU 2 from about MP 1.0 to MP 1.35 (DTSC 2004a). Potential contaminants of concern for soils from the surface to a depth of 200 feet (61 m) below

ground surface for OU 2 include perchlorate, volatile organic compounds, and unspecified metals. OU 2 is expected to receive certification that the site has been cleaned up to the required level by October 2006. OU 7 encompasses all the groundwater throughout the site and area where soil contamination was identified below 200 feet (61 m) and is expected to be certified as cleaned up by 2010. The main contaminants of concern in the groundwater are perchlorate and volatile organic compounds. No specific contaminant issues have been identified in OU 10s.

As previously discussed, there are many potential hazardous material or waste sites within 0.5 mile (0.8 km) of the proposed Center Road Pipeline and Line 225 Pipeline Loop routes, and onshore oil seeps have been identified in the general area near the Line 225 Pipeline Loop. Construction crews could potentially encounter contaminated soil or water during trenching and drilling operations. In addition, an unknown or unrecorded disposal site may be encountered. If potential contamination is uncovered, members of the public could be exposed through direct contact or inhalation of contaminated materials. Adverse health effects, however, are unlikely to occur from a short-term exposure to contaminated soils or waters.

The Applicant, or its designated representative, has incorporated the following into the project:

AM HAZ-3a. **Prevent Migration of Contaminated Soils**. If buried hazardous materials or contamination are discovered, the Applicant, or its designated representative, would implement BMPs, specifically BMP 2-06 “Contaminated Soil Management,” to prevent migration of contaminated soils or other materials off site. This may include covering an area of contaminated soil or contaminated soil stockpiles with tarps to prevent contaminated dust from blowing off site during windy conditions or providing containment to collect and store stormwater that may have become contaminated.

Mitigation Measure(s) for Impact HAZ-3: Release of Existing Contaminants from Sediments, Soils, or Groundwater

MM HAZ-3b. **Consult with DTSC Regarding Cleanup of Soil and Groundwater at Whittaker-Bermite Site (MP 0.2 to 1.25).** Soil contamination in OU 2 immediately adjacent to or within the proposed pipeline route is expected to be cleaned up by 2006 and certified as such by DTSC. The Applicant or its designated representative shall coordinate with DTSC to identify potential soil and/or groundwater contamination hazards present in the proposed pipeline ROW and to determine whether additional surveys or screening-level sampling are warranted in areas to be disturbed by pipeline construction prior to any construction. To confirm that the appropriate level of coordination occurs with the DTSC, the Applicant, or its designated representative, shall submit a letter detailing the results of consultation with the DTSC and any specific

measures that are to be implemented during construction to the USCG and the CSLC, with a copy to the DTSC, 60 days prior to initiating construction. The CSLC would assist the Applicant or its designated representative with DTSC consultation, if requested by the Applicant or its designated representative.

MM HAZ-3c. Onshore Surveys. In areas where the proposed pipeline alignments diverge from existing ROWs, the Applicant or its designated representative shall conduct additional surveys to identify potential areas of soil and/or groundwater contamination. If contaminated sites are identified, the Applicant or its designated representative shall implement its Hazardous Material Contingency Plan (see MM HAZ-2c) and implement best management practices.

Much of the onshore pipeline routes pass through existing ROWs that have been previously cleared for the presence of hazardous materials. With the implementation of the measures identified above for areas where the new onshore pipeline routes diverge from existing ROWs, any newly discovered contaminated soils would be handled to prevent exposure of workers and the public to these contaminants. Therefore, this impact would be either avoided or reduced to a level below its significance criteria.

Impact HAZ-4: Potential Disturbance or Detonation of Unexploded Ordnance due to Onshore or Offshore Construction

Offshore pipeline installation and onshore pipeline construction activities could encounter UXO, causing an explosion that could result in serious injuries or fatalities to workers or the public, and—for offshore locations—serious injuries or fatalities to marine life from subsurface blast pressures (Class II).

Approximately 12.2 NM (14 miles or 22.6 km) of the subsea pipeline, i.e., from MP 3 to MP 17, would lie within the Point Mugu Sea Range. Although the pipeline route is proposed for an area where missiles are not ordinarily targeted, UXO, drones, or other debris from missile testing may be located near or within the proposed subsea pipeline corridor. Onshore, the part of the proposed Line 225 Pipeline Loop route from about MP 0.2 to about MP 1.25 runs along the southern boundary of the Whittaker-Bermite cleanup site, where UXO has been identified as a site-wide concern. However, the proposed route follows the existing Line 225 pipeline ROW, which was cleared of UXO during its construction in the late 1950s and early 1960s and has been patrolled and maintained on a routine basis for the past five decades.

<u>Mitigation Measures for Impact HAZ-4: Potential Disturbance or Detonation of UXO due to Onshore or Offshore Construction</u>

MM HAZ-4a. Offshore Surveys. The Applicant shall conduct additional surveys at the offshore pipeline installation within and near the Point Mugu Sea Range to locate visible and shallowly buried UXO that might be disturbed by pipeline installation and avoid identified UXO or

develop, in consultation with the U.S. Navy, procedures to eliminate such UXO.

MM HAZ-4b. Coordination with the California Department of Toxic Substances Control. The Applicant, or its designated representative, shall coordinate with the DTSC before conducting any surveys or construction activities at parts of the Line 225 Pipeline Loop route on or near the Whittaker-Bermite site to determine whether additional UXO surveys would be warranted and shall ensure that those surveys are conducted if deemed necessary. If UXO is present, the Applicant will recover and dispose it as required by DTSC prior to beginning construction. The Applicant, or its designated representative, shall submit a letter to the CSLC and the USCG with a copy to the DTSC documenting the outcome of coordination and the status of follow-up 60 days prior to beginning construction.

Because of its location within an existing ROW, the Line 225 Loop pipeline would not likely encounter UXO. Conducting offshore surveys for UXO within the Point Mugu Sea Range would minimize the chance of encountering UXO. By conducting such surveys and coordinating with the DTSC regarding the Whittaker-Bermite site, this impact would be below the significance criteria.

Impacts and mitigation measures associated with hazardous materials are summarized in Table 4.12-3.

Table 4.12-3 Summary of Hazardous Materials Impacts and Mitigation Measures

Impact	Mitigation Measure(s)
Impact HAZ-1: Improper handling of hazardous materials or leaks in containers on the FSRU and support vessels could result in a release to the marine environment or exposure of workers or the public (Class III).	None.
Impact HAZ-2: Activities associated with site preparation, construction, and drilling, as well as operations and maintenance activities, could result in an accidental spill of hazardous materials or oil and exposure of workers or the public (Class II).	**AM HAZ-2a. Use Best Management Practices.** The Applicant, or its designated representative, would maintain hazardous materials at the staging areas in proper storage containers and with sufficient secondary containment in accordance with best management practices, in addition to Federal and State regulations. **MM HAZ-2b. Maintain Equipment.** The Applicant, or its designated representative, shall maintain equipment in good operating condition to reduce the likelihood of fuel or oil line breaks and leakage. Any vehicles with chronic or continuous leaks shall be removed from the construction site and repaired before being returned to operation. **MM HAZ-2c. Hazardous Material Contingency**

Table 4.12-3 Summary of Hazardous Materials Impacts and Mitigation Measures

Impact	Mitigation Measure(s)
	Plan. The Applicant, or its designated representative, shall prepare a detailed hazardous material contingency plan that defines how the contaminated soil and/or groundwater is to be handled and disposed and training for personnel. **MM WAT-3a: Drilling Fluid Release Monitoring Plan.**
Impact HAZ-3: Construction activities could unearth existing contaminated sites onshore and offshore, causing potential health hazards to construction workers, the public, and marine and terrestrial ecology (Class II).	**AM HAZ-3a. Prevent Migration of Contaminated Soils**. If buried hazardous materials or contamination are discovered, the Applicant, or its designated representative, would implement best management practices, specifically BMP 2-06 "Contaminated Soil Management," to prevent migration of contaminated soils or other materials off site. This may include covering an area of contaminated soil with tarps to prevent contaminated dust from blowing off site during windy conditions or providing containment to collect and store stormwater that may have become contaminated. **MM HAZ-3b. Consult with DTSC Regarding Cleanup of Soil and Groundwater at Whittaker-Bermite Site (MP 0.2 to 1.25).** Soil contamination in Operable Unit 2 immediately adjacent to or within the proposed pipeline route is expected to be cleaned up by 2006 and certified as such by DTSC. The Applicant or its designated representative shall coordinate with the DTSC to identify potential soil and/or groundwater contamination hazards present in the proposed pipeline alignment and to determine whether additional surveys or screening-level sampling are warranted in areas to be disturbed by pipeline construction prior to any construction. To confirm that the appropriate level of coordination occurs with the DTSC, the Applicant, or its designated representative, shall submit a letter detailing the results of consultation with the DTSC and any specific measures that are to be implemented during construction to the USCG and the CSLC, with a copy to the DTSC, 60 days prior to initiating construction. The CSLC would assist the Applicant, or its designated representative, with DTSC consultation, if requested by the Applicant, or its designated representative. **MM HAZ-3c. Onshore Surveys.** In areas where the proposed pipeline alignments diverge from existing ROWs, the Applicant, or its designated representative, shall conduct additional surveys to identify potential areas of soil and/or groundwater contamination. If contaminated sites are identified**,** the Applicant, or its designated representative,

Table 4.12-3 Summary of Hazardous Materials Impacts and Mitigation Measures

Impact	Mitigation Measure(s)
	shall implement its Hazardous Material Contingency Plan and implement best management practices.
Impact HAZ-4: Offshore pipeline installation and onshore pipeline construction activities could encounter UXO, causing an explosion that could result in serious injuries or fatalities to workers or the public, and—for offshore locations—serious injuries or fatalities to marine life from subsurface blast pressures (Class II).	**MM HAZ-4a. Offshore Surveys.** The Applicant shall conduct additional surveys at the offshore pipeline installation within and near the Point Mugu Sea Range to locate visible and shallowly buried UXO that might be disturbed by pipeline installation and avoid identified UXO or develop, in consultation with the U.S. Navy, procedures to eliminate such UXO. **MM HAZ-4b. Coordination with the California Department of Toxic Substances Control.** The Applicant, or its designated representative, shall coordinate with the DTSC before any surveys or construction activities at parts of the Line 225 Pipeline Loop route on or near the Whittaker-Bermite site to determine whether additional UXO surveys would be warranted and shall ensure that those surveys are conducted if deemed necessary. If UXO is present, the Applicant will recover and dispose it as required by DTSC prior to beginning construction. The Applicant, or its designated representative, shall submit a letter to the CSLC and the USCG with a copy to the DTSC documenting the outcome of coordination and the status of follow-up 60 days prior to beginning construction.

4.12.5 Alternatives

4.12.5.1 No Action Alternative

As explained in greater detail in Section 3.4.1, “No Action Alternative,” under the No Action Alternative, MARAD would deny the license for the Cabrillo Port Project and/or the CSLC would deny the application for the proposed lease of State tide and submerged lands for a pipeline ROW. The No Action Alternative means that the Project would not go forward and the FSRU, associated subsea pipelines, and onshore pipelines and related facilities would not be installed. Accordingly, none of the potential environmental impacts identified for the construction and operation of the proposed Project would occur.

Since the proposed Project is privately funded, it is unknown whether the Applicant would fund another energy project in California; however, should the No Action Alternative be selected, the energy needs identified in Section 1.2, "Project Purpose, Need and Objectives," would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such proposed projects may result in potential environmental impacts of the nature and magnitude of the proposed Project

as well as impacts particular to their respective configurations and operations; however, such impacts cannot be predicted with any certainty at this time.

4.12.5.2 Alternative Deepwater Port Location – Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline

There are no charted ocean dumpsites within 0.5 mile (0.8 km) of the proposed Santa Barbara Channel/Mandalay Shore Crossing/Gonzales Road Pipeline Alternative (NOAA 2003b). Offshore impacts would be similar to those of the proposed route. Since the alternative pipeline route would be shorter in length, construction time would be reduced; therefore, the overall risk of a potential spill would decrease slightly.

This alternative includes the HDB installation of approximately 1.4 miles (2.3 km) of pipe to make the shore crossing, compared to between 0.85 and 0.95 mile (1.37 and 1.53 km) for the proposed route. This would result in an increase in the amount of HDB to be performed and increase the potential for a release of drilling fluids. Therefore, the impact potential is greater than for the proposed route, but the difference between the two alternatives is small. Thus, the impacts and associated mitigation measures would be the same as for the proposed Project.

4.12.5.3 Alternative Onshore Pipelines

Center Road Pipeline Alternative 1

The database search identified 52 hazardous material/waste sites located within 0.5 mile (0.8 km) of the Alternative 1 route. Given the increased number of potential hazardous material and waste sites compared with the proposed route, there would be a greater potential to encounter contaminated soil or water during construction. The impacts from the use, storage, and transport of hazardous materials on this route would be similar to the proposed route. Although the number of hazardous material/waste sites is greater than that along the proposed Center Road Pipeline route, the mitigation measures identified for the proposed route would also be applicable to this alternative.

Center Road Pipeline Alternative 2

Seventeen potential hazardous materials or hazardous waste sites were identified within 0.4 NM (0.5 mile or 0.8 km) of the Center Road Pipeline Alternative 2 route. This is more than twice the number identified along the proposed route; therefore, there would be a slightly greater potential to encounter contaminated soil or water during construction. The impacts from the use, storage, and transport of hazardous materials on this route would be similar to the proposed route. Although the number of hazardous material/waste sites is greater than that along the proposed Center Road Pipeline route, the mitigation measures identified for the proposed route would also be applicable to this alternative.

Center Road Pipeline Alternative 3

With the exception of the northernmost portion, this route is identical to the proposed route. Under this alternative the pipeline would still traverse agricultural land; therefore, there is no significant difference between the proposed route and Alternative 3 and the impacts would be the same. The mitigation measures identified for the proposed route would also be applicable to this alternative.

Line 225 Pipeline Loop Alternative

The Line 225 Pipeline Loop Alternative would cross within 0.5 mile (0.8 km) of an additional four potential hazardous material or waste sites; therefore, there would be a slightly greater potential to encounter contaminated soil or water during construction than with the proposed route. The impacts from the use, storage, and transport of hazardous materials on this route would be similar to the proposed route, and the mitigation measures identified for the proposed route would be also applicable to this alternative.

Under an alternative construction method for the Line 225 Loop river crossing, the Applicant or its designated representative would cross the Santa Clara River via HDD rather than install the pipeline within the bridge girders. This methodology is the same as would be used for crossing major road intersections and railroads and is similar to the methodology to be used for the shore crossing at Ormond Beach. There is a greater chance for the release of drilling fluids during the use of HDD as compared to HDB; however, mitigation measures would be the same as for the proposed Ormond Beach shore crossing.

4.12.5.4 Alternative Shore Crossing/Pipelines

Point Mugu Shore Crossing/Casper Road Pipeline

This alternative shore crossing and approximately 1-mile (1.6 km) long pipeline route lies within 0.5 mile (0.8 km) of two sites with known contamination from leaking USTs: Marabi Farms at 2292 Hueneme Road and the Verizon Mugu Central Office at 2463 Hueneme Road. The potential to encounter contaminated soil or water during construction for this alternative would not be markedly different from the proposed route. Therefore, the mitigation measures identified for the proposed route would also be applicable to this alternative.

Arnold Road Shore Crossing/Arnold Road Pipeline

This alternative shore crossing and approximately 1 mile (1.6 km) long pipeline route lie within 0.5 mile (0.8 km) of a single site with known contamination, the Del Norte Foods site at 6859 Arnold Road, compared with the two known sites for the proposed shore crossing at Ormond Beach and the first 1.5 miles (2.4 km) of the proposed pipeline. However, the Arnold Road Dump is located at the end of Arnold Road, which may increase the potential to encounter contaminated soil or water during construction compared to the proposed route. The dump was closed in 1960 (SWIS 2004).

Although the potential to encounter contaminated soil or water during construction for this alternative would be slightly greater than for the proposed route, the mitigation measures identified for the proposed route would also be applicable to this alternative.

4.12.6 References

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